The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application. Any changes or deletions are without prejudice or disclaimer of Applicants' right to present prior versions at a later time--e.g., in this application or in a continuing application.

Listing of The Claims:

1. (Currently Amended) A circuit for adaptively amplifying an input signal, the circuit comprising:

an adaptive filter connected to receive the input signal and to amplify a predetermined frequency range of the input signal by an amount based on an amplification control signal input to the adaptive filter to generate an amplified input signal;

a comparator connected to receive the amplified input signal from the adaptive filter and a predetermined threshold signal, the comparator outputting a comparison signal that compares the amplified input signal to the predetermined threshold signal; and

a filter adaptation circuit connected to receive the comparison signal and to ~~modify~~ generate the amplification control signal based on the comparison signal during a normal mode of operation, and to calibrate the generation of the amplification control signal based on the comparison signal and a known training pattern during a training mode of operation.

2. (Currently Amended) The circuit of Claim 1, wherein the input signal is a SCSI (small computer system interface) signal and the adaptive filter reduces inter-symbol interference (ISI) in the SCSI signal based on the known training pattern.

3. (Original) The circuit of Claim 1, wherein the predetermined frequency range amplified by the adaptive filter consists of high frequency components of the input signal.

4. (Original) The circuit of Claim 1, wherein the adaptive filter is a third order Bessel filter.

5. (Previously Presented) The circuit of Claim 1, further comprising

a digital-to-analog converter connected between the adaptive filter and the filter adaptation circuit, the digital-to-analog converter converting a digital version of the amplification control signal output from the filter adaptation circuit to an analog version of the amplification control signal for input to the adaptive filter.

6. (Previously Presented) A circuit for adaptively amplifying an input signal, the circuit comprising:

an adaptive filter connected to receive the input signal and to amplify a predetermined frequency range of the input signal by an amount based on an amplification control signal input to the adaptive filter to generate an amplified input signal;

a comparator connected to receive the amplified input signal from the adaptive filter and a predetermined threshold signal, the comparator outputting a comparison signal that compares the amplified input signal to the predetermined threshold signal; and

a filter adaptation circuit connected to receive the comparison signal and to modify the amplification control signal based on the comparison signal and a known training pattern; and

a digital-to-analog converter connected between the adaptive filter and the filter adaptation circuit, the digital-to-analog converter converting a digital version of the

amplification control signal output from the filter adaptation circuit to an analog version of the amplification control signal for input to the adaptive filter, wherein the filter adaptation circuit comprises:

a first circuit connected to receive the comparison signal, the known training pattern, and a system clock signal, the first circuit converting the comparison signal, the known training pattern, and the system clock signal into a first output signal that is asserted on a falling edge of the known training pattern when the comparison signal indicates that the input signal is above a level of the predetermined threshold signal and a second output signal that is asserted on the falling edge of the known training pattern when the comparison signal indicates that the input signal is below the level of the predetermined threshold signal; and

a second circuit connected to receive the first and second output signals and to increase the amplification control signal when the first output signal is asserted and the second output signal is not asserted and to decrease the amplification control signal when the first output signal is not asserted and the second output signal is asserted.

7. (Currently Amended) A method of canceling inter-symbol interference (ISI) in an input signal, the method comprising:

amplifying high frequency components of the input signal by an amount based on an amplification control signal to generate an amplified input signal;

comparing the amplified input signal with a predetermined threshold level to generate a comparison signal;

generating the amplification control signal based on the comparison signal during a normal mode of operation; and

iteratively modifying the amplification control signal based on the comparison signal and a known training pattern during a training mode of operation.

8. (Currently Amended) A method of canceling inter-symbol interference (ISI) in an input signal, the method comprising:

amplifying high frequency components of the input signal by an amount based on an amplification control signal to generate an amplified input signal;

comparing the amplified input signal with a predetermined threshold level to generate a comparison signal;

generating the amplification control signal based on the comparison signal during a normal mode of operation; and

iteratively modifying the amplification control signal based on the comparison signal and a known training pattern during a training mode of operation, wherein said modifying the amplification control signal comprises ~~includes~~:

increasing the amplification control signal based on the known training pattern and based on when the comparison signal indicates that the input signal is above the predetermined threshold level; and

decreasing the amplification control signal based on the known training pattern and based on when the comparison signal indicates that the input signal is below the predetermined threshold level.

9. (Previously Presented) The method of Claim 7, wherein a voltage level of the predetermined threshold level is a voltage offset from a voltage level used to convert the input signal to a digital value.

10. (Previously Presented) The method of Claim 9, wherein the voltage level of the predetermined threshold level is below a voltage level used to convert the input signal to the digital value.

11. (Original) The method of Claim 7, wherein the amplification of the high frequency components is performed using a third order Bessel filter.

12. (Previously Presented) The circuit of Claim 1, wherein the comparison signal indicates whether the amplified input signal is greater than the predetermined threshold signal.